

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A spray device for a printing press comprising:

a liquid inlet orifice for receiving a liquid;

a gas inlet orifice for receiving a gas disposed downstream from the liquid inlet orifice;

an exit orifice disposed at a distance from a surface of the printing press; and

an internal passage communicating with the liquid inlet orifice, the gas inlet orifice and the exit orifice, the internal passage including a mixing chamber for entraining the gas in the liquid; the mixing chamber being defined by an enlarged region of the internal passage, the internal passage being narrower than the enlarged region downstream from the mixing chamber.

Claim 2 (canceled).

Claim 3 (currently amended): The spray device as recited in claim 1 2, wherein the liquid inlet orifice, the gas inlet orifice, and at least a portion of the internal passage, are defined by an insert member.

Claim 4 (original): The spray device as recited in claim 3, wherein the exit orifice is defined by a nozzle tip disposed at a downstream end of the insert member.

Claim 5 (previously presented): The spray device as recited in claim 4, wherein the internal passage is defined by the insert member and the nozzle tip.

Claim 6 (original): The spray device as recited in claim 4, further comprising a body member having a liquid conduit and disposed at an upstream end of the insert member so that the liquid conduit communicates with the liquid inlet orifice.

Claim 7 (original): The spray device as recited in claim 6, further comprising a valve element for

enabling a pulsed flow of the liquid through the body.

Claim 8 (original): The spray device as recited in claim 7, further comprising a solenoid configured to actuate the valve element.

Claim 9 (original): The spray device as recited in claim 1, wherein the surface of the printing press includes a portion of a dampening cylinder.

Claim 10 (original): The spray device as recited in claim 1, wherein the liquid is at least one of water and an aqueous fountain solution.

Claim 11 (original): The spray device as recited in claim 1, wherein the gas is air.

Claim 12 (previously presented): The spray device as recited in claim 1, wherein the gas provided to the gas inlet orifice is at atmospheric pressure.

Claim 13 (original): The spray device as recited in claim 1, wherein the gas outside the gas inlet orifice is pressurized to a pressure greater than atmospheric pressure.

Claim 14 (previously presented): The spray device as recited in claim 6, further comprising a connecting device removably attached to one of the insert member and the body member for holding the nozzle tip adjacent to the insert member.

Claim 15 (original): A printing press comprising a spray device according to claim 1.

Claim 16 (currently amended): A method for applying a liquid to a surface of a printing press, the method comprising:

providing a liquid to a liquid inlet orifice of a spray device;

providing a gas to a gas inlet orifice of the spray device;

mixing entraining the gas in and the liquid so as to form a mixture of the liquid and the gas in which the gas is entrained in the liquid; and

spraying the mixture of the liquid and gas onto the surface of the printing press.

Claim 17 (original): The method as recited in claim 16, further comprising repeatedly interrupting a flow of liquid through the spray device so as to cause the spraying to be performed in a pulsed fashion.

Claim 18 (original): The method as recited in claim 16, further comprising controlling a flow rate of the liquid through the spray device by changing a size of the liquid orifice.

Claim 19 (original): The method as recited in claim 16, further controlling a flow rate of gas through the spray device by changing a size of the gas inlet orifice.

Claim 20 (original): The method as recited in claim 16, wherein the spraying is performed using an outlet orifice of the spray device, and further comprising selecting at least one of a size and a shape of the outlet orifice so as to affect a spray pattern.

Claim 21 (new): A spray device for a printing press comprising:

- a liquid inlet orifice for receiving a liquid;
- a gas inlet orifice for receiving a gas disposed downstream from the liquid inlet orifice;
- an exit orifice disposed at a distance from a surface of the printing press; and
- an internal passage communicating with the liquid inlet orifice, the gas inlet orifice and the exit orifice, the internal passage including a mixing chamber for entraining the gas in the liquid;

the gas inlet orifice being upstream of the mixing chamber.